

Car Seat Use: A Study of Attitudes and Observations.

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Car crashes are the leading cause of death for children over one year old in the United States. Each year motor vehicle related injuries result in the death of approximately 4600 children, and, for every death, 39 become disabled (Cataldo et al., 1986). Native American children account for an even higher incidence of fatalities in all types of injuries, including car crashes. A report from Johns Hopkins Injury Prevention Center showed that from 1980 to 1985, injury related fatalities of Native American children accounted for 26% of all childhood deaths in South Dakota, while motor vehicle occupant fatalities of Native American children accounted for 22% of children's deaths in the state. This is an alarming rate when considering that Native Americans comprise only 7% of the state's population (I.H.S. Aberdeen Area Office, 1990).

The use of car seats has been proven to reduce the numbers of deaths and injuries of children. In California alone an 8% decrease in injuries to children was seen in the first year following implementation of the California Child Passenger Safety Law (MacKinnon, 1985). This fact has motivated medical associations to successfully lobby for child passenger safety legislation in nearly every state in the early 1980's (Fawcett, Seekins, & Jason, 1987). To date, all 50 states and the District of Columbia have enacted these laws with fines which run from \$25 to \$500. These laws have increased car seat use as seen in recent surveys. Aggregated across the states surveyed, the percentage of children riding in car seats averaged 13% before laws were implemented and 26% after implementation (Seekins, et al., 1988).

South Dakota passed a child-passenger restraint law in 1990 which requires every driver with a child passenger under 5 years of age to provide protection by properly securing children under 2 in a car seat and buckling children from 2 to 5 years in a car seat or seat belt. State laws are not enforced on reservations, however, and the Crow Creek Reservation does not have a car seat law. This study has observed an increase in car seat use off the reservation among reservation residents due to this state law. The law may also account for some increased use on the reservation in a carryover effect.

Aside from the state law, the only incentives offered to the residents of the Crow Creek Reservation are educational and motivational efforts. The doctors and nurses suggest to parents that they should borrow a car seat from our lending program. I promote educational efforts by writing articles on car seat safety for the reservation newsletter, hanging car seat safety fliers in public places, presenting Vince and Larry skits, and conducting seat belt/car seat classes at all the Head Starts, elementary schools and at the annual I.H.S. Clinic Health Fair. The lending program itself is advertised via fliers and in the newsletter.

The Indian Health Service Clinic on the Crow Creek Reservation began a car-seat lending program in January, 1989, which continues to operate. It supplies infant and toddler seats through the Clinic and through the Clinic's two contract hospitals' OB wards. The lending program asks for a refundable \$10 deposit per seat but if the parent cannot afford that amount, the seat is lent anyway. Thus, affordability is not an issue in the decision to use a car seat.

The car-seat lending program has enough infant seats at present but the supply of toddler seats is not sufficient to meet the demand of all the parents who want a seat. To supply a seat to every child under five, we would need 194 toddler seats. At present we have only 122 toddler seats and therefore need an additional 72 toddler seats to meet the current need, plus about 50 more seats each year to provide for the birth rate. The infant seats are easily cleaned and re-used due to the short lending time, but the lending time for toddler seats can be as long as 5 years. After 5 years of use most toddler seats will probably not be salvageable and will have to be replaced.

The object of this study is to determine what factors influence parents the most in their decision to use or not to use a car seat--whether the reasons are mainly educational, cultural, or legal. By determining what best influences parents, future efforts to increase car seat use may be more effectively targeted. This study also includes an observation of the actual car seat usage on the day of the survey and concludes with questions designed to find how a reservation car seat law may affect car seat use.

The second phase of the study was to have a car seat law passed on the reservation. This had been repeatedly delayed and will not be included in this study. I am still hopeful that a law may be passed soon. The Tribal

Chairman and several Councilmen have expressed an interest in passing a car seat law and may be a source of ideas on how to approach the council in the future on this subject. A future survey of how the law affects car seat use would be an interesting and useful tool for other reservations in their decision to pass a law.

Method

A three-page exploratory questionnaire was used in evaluating the parents' habits, attitudes, and opinions on car seat use. The questions included what range of factors motivated the parent to use a car seat; what issues, if any, deterred them from using car seats on all trips; how they would respond to a reservation car seat law; and what knowledge they had of the safety benefits of using a car seat. Before the interview began, a visual observation was made of their car seat use. The parent, either the mother or father, was then asked to fill out the questionnaire. The sample units were one parent per vehicle with a child passenger.

The first part of the questionnaire was an observation of what the parents' usage was on a random day. The ages of the parents ranged from 17 to 53 with a mean of 28.5 years. Seventy percent were between the ages of 20 and 32. The reason for including an observation of actual car seat use was the tendency of people to say what they believe you want to hear, while observation is strictly objective. The limitation was that some parents of toddlers expressed a desire to use car seats but couldn't due to the lending program's shortage of toddler seats.

The second part of the questionnaire dealt with the parents' beliefs and attitudes about car seat safety and depended mainly on the person's willingness to be honest about their behavior. The limitation is in the self-evaluation method of data collection in which the parents are trusted to respond honestly and accurately on their reasons for using car seats and on their reaction to a reservation law.

Finally, 50 vehicles with child passengers under 5 years of age were chosen at random at the Ft. Thompson grocery store, the Indian Health Service Clinic, and the Post Office. The nature of these sites may account for a smaller percentage of people observed using car seats due to the prevalent feeling that driving in Ft. Thompson is not dangerous. Many parents who were observed not using car seats claimed to use car seats off the reservation while freely admitting that they chose not to use car seats on the reservation. Concurrently, some of those who were observed using car seats admitted this was only because they were traveling outside the reservation shortly and otherwise would not be using them. Most people believed that for short trips around Ft. Thompson a car seat was not necessary due to the slow speeds and short distances involved.

There were two field workers involved in the collection of data via the questionnaire: myself and Bill Sherwood, Pierre District Sanitarian. Bill was instructed by me on what to look for and how to fill out the questionnaire.

The population size was defined as the number of families with children under five years old, and was calculated by counting every mother who has a child or children under 5 years of age. On the Crow Creek Reservation I counted 183 mothers who had at least one child in this age range. The count was made by reviewing the immunization records of all the children under five years and noting their mothers. Mothers with more than one child in this age range were accounted for. The fifty parents interviewed are the sample population which fit the 95% confidence interval at an expected frequency of 25% if the worst acceptable frequency is from 15% to 35%.

The population size for the number of families with children under ten months or those who would still fit an infant seat is forty-six. Of the total number of children observed in the fifty vehicles only nine were infants and 5 were buckled in their seats. With the expected frequency being 55% and nine infants as the sample population with a confidence level of 95%, the worst acceptable frequency would have to be from 25% to 85%. The number of infants observed simply were not enough to make a valid statistical base. Many of the parents stated that they did not take their infants with them on errands around town but left them with a family member at home.

Other calculations using the questionnaire data were derived by examining the two main groups of people: those who use car seats (even occasionally) and those who do not. By examining the two groups and taking percentages of their responses, their reasoning could be quantified.

Results

The first seat belt/car seat survey was conducted in Ft. Thompson in August, 1988. This occurred before the car seat program was begun and before the state law was passed. Twenty-seven children were sighted in vehicles and, of these, none were belted or restrained in car seats.

Shortly after this survey the car seat lending program was begun and South Dakota passed its first car seat law. In December, 1991, almost three years into the program, a second survey was conducted in Ft. Thompson. Of the 50 vehicles identified, 24% had at least one child buckled up. The often-used excuse that there are generally too many children in a vehicle for seat belts to be used was not upheld in the majority of vehicles.

Ninety-seven percent of the parents responded to the question, "Have you ever used a car seat?", with an affirmative answer. This indicates that in the three years of the car seat lending program's existence, it has had a real effect on the reservation by providing most parents with the opportunity to use a car seat. Some of the parents acknowledged that they had never personally borrowed one from the program but had borrowed one temporarily from a friend or relative for special trips off the reservation. This majority of parents who claim to have used a car seat at least once corresponds almost identically with the ninety-six percent who indicated an awareness that a car seat could save their child's life in a vehicle crash. These figures also illustrate the success the car seat lending program has achieved in educating the population and in having an impact on their knowledge and behavior.

The fifty parents were also asked if they would use a car seat if they received a fine for not using one. Sixty-eight percent claimed this would be enough incentive for them. Interestingly, an almost identical percentage (sixty-seven percent) claimed that a reservation car seat law would be enough incentive for them to use a car seat. This number should be a key element in the council's decision to pass a car seat law. The one person who said that a reservation car seat law would not be an incentive explained that she believed the police would not enforce it. Enforcement is not always the main incentive in a law, as was seen in the Indiana car seat ownership survey. Ownership went from 37 percent to 60 percent after the passage of the state law, even though it was rarely enforced and imposed no penalty if parents, subsequent to ticketing, had acquired an approved car seat (Carlin & Sandy, 1990).

Of the 50 parents interviewed, 25 claimed to buckle their children up when traveling off the reservation. This is a usage rate of 50% off the reservation and is more than double the 24% who were observed using them on the reservation. These twenty-five parents who used a car seat off the reservation were questioned further if they would use a car seat on the reservation if the reservation had a car seat law. Nineteen of the twenty-five parents, 76 percent, said that this would be enough incentive to use a car seat on the reservation.

The reasons for using car seats were evaluated next. These included a wide range of motivational factors such as health education, a hospital rule, an article read on car seats, encouragement from friends or relatives, the state law, concern for the child's safety, or a previous car crash. The parents could choose as many factors as they wished to explain how they were motivated to use car seats. Of the 25 parents who claimed to use car seats off the reservation the most common reason given (76%) was a concern for their child's safety. The second most common reason, at 64%, was the state law and the threat of a fine. The third most common reason, at 48%, was encouragement from a family member. Of the various family members, the mother or mother-in-law was cited with the most frequency, at 66%. The hospital rule was selected as the fourth most common reason to use car seats, by 32% of the parents.

Conversely, all of the parents were asked to give reasons for not using car seats. Some of the parents were safety conscious and claimed that they always used car seats on every trip and thus claimed none of the reasons. Answers were recorded for those parents who used car seats only off the reservation, only occasionally, or not at all, basically because there are times when almost everyone neglected to use them for some reason. The most common excuse given by parents for not using a car seat, at 38 percent, was that they did not drive very far or very often and so did not consider the threat of an accident very likely. This attitude was persistent among both those people who used car seats off the reservation and those who never used car seats. Their home town appears familiar and safe to them and warrants no extra safety precautions. The second most common excuse, at 34 percent, was that their child did not like to sit in a seat. This was not surprising since most parents have the same complaint at some time. Those who believe that the seats are worthwhile in protecting their child will continue to use them despite the inconvenience of an unhappy child. The third most common excuse, at 22 percent, is that the parent is not worried about being stopped by the state patrol and thought it was unlikely that they would ever be fined. Other commonly cited excuses

were the parent's faith in their own driving ability, the prohibitive expense of a seat, and their failure to think about using them before.

Summary

Car crashes are the leading cause of fatal injuries for children while correct usage of child car-safety seats is still their best form of protection. The purpose and intent of this study was to determine what factors motivate parents to use car seats on the Crow Creek Sioux Reservation in South Dakota, and, on the flip side, what factors may detract from using a car seat on every trip. By determining what parents are influenced by the most, future efforts at increasing car seat usage can be better targeted.

From this study I have reached three conclusions. The first is that safety education plays a major role in convincing parents to use car seats as seen by the 94% who said they used car seats due to concern for their child's safety and by the 96% who said that they were aware that car seats could save their child's life in a crash.

My second conclusion is that a reservation car seat law would go far in increasing car seat use. As indicated by the parents' responses, the law may not need to be heavily enforced in order to be effective, although it would be advisable to enforce it in any case.

The third conclusion is that older people are also a valuable resource in convincing their sons and daughters to use car seats with their grandchildren. In the future, the older people, especially women, should be included in safety education efforts in order to make them even more effective as car seat lobbyists within their families.

Safety education in general is needed to reach more people who still believe that driving in their home town is not dangerous. Many people who would otherwise use a car seat on the highway or in an off-reservation city are often lulled into believing that they are safe driving through the familiar streets of their own town. Parents need to understand the hazards of this misconception, and to realize that their child's temporary unhappiness in a car seat is a small price to pay for their safety.

The next step is to advocate for a car seat law on the reservation. The present council has been very busy during the first few months of office and have rarely been able to have regularly scheduled meetings. The final survey of the effectiveness of a car seat law will probably not be completed due to time limitations. If it is possible to have a car seat law passed, however, I am confident that there will be a marked increase in car seat usage.

References

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